

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for preparing a composition of matter containing at least one rare earth element comprising:

providing a first composition which comprises nanoparticles comprising at least one rare earth element; and

reacting the first composition with an organic liquid or nitric acid a substance wherein the reaction creates a second composition comprising at least one rare earth element that is different from the first composition.

2. (Currently Amended) The method of claim 1, wherein the second composition of matter is an inorganic compound.

3. (Currently Amended) The method of claim 1, wherein the second composition of matter is an organic compound.

4. (Original) The method of claim 1, wherein the at least one rare earth element is scandium (Sc).

5. (Original) The method of claim 1, wherein the at least one rare earth element is yttrium (Y).

6. (Original) The method of claim 1, wherein the at least one rare earth element is lanthanum (La).

7. (Original) The method of claim 1, wherein the at least one rare earth element is cerium (Ce).

8. (Original) The method of claim 1, wherein the at least one rare earth element is praseodymium (Pr).

9. (Original) The method of claim 1, wherein the at least one rare earth element is selected from neodymium (Nd), samarium (Sm), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), and lutetium (Lu).

10. (Original) The method of claim 1, wherein the at least one rare earth element is europium (Eu).

11. (Currently Amended) The method of claim 1, wherein the second composition of matter comprises nanoparticles.

12. (Currently Amended) A product comprising the second composition of matter of claim 21.

13. (Currently Amended) The method of claim 1, wherein the second composition of matter comprises a dispersion.

14. (Original) The method of claim 1, wherein the surface area of nanoparticles is greater than 25 m²/gm.

15. (Currently Amended) The method of claim 1, wherein the second composition of matter comprises submicron particles.

16. (Currently Amended) The method of claim 1, wherein the second composition of matter comprises at least one precursor.

17. (Original) The method of claim 1, wherein the first composition comprises at least one oxide.

18. (Original) The method of claim 1, wherein the first composition comprises at least one carbonate.
19. (Original) The method of claim 1, wherein the first composition comprises at least one nitrate.
20. (Original) The method of claim 1, wherein the first composition comprises at least one hydroxide.
21. (Previously Presented) The method of claim 1, wherein the second composition different from the first composition comprises nanoparticles.
22. (Currently Amended) The product of claim 12, wherein the product is selected from the group consisting of a pigment, a polishing agent, a coating, an electroceramic, a catalyst, ~~an optie~~, a phosphor, and a detector.
23. (New) The method of claim 1, wherein the substance is an organic acid.
24. (New) The method of claim 23, wherein the second composition comprises a compound selected from the group consisting of an acetate, a propanoate, a hexanoate, an ester, and an amine.
25. (New) The method of claim 24, wherein the second composition comprises hexanoate nanoparticles.
26. (New) The method of claim 1, wherein the substance is nitric acid.
27. (New) The method of claim 26, wherein the second composition comprises a compound selected from the group consisting of a sulfate, a phosphate, or a halide.
28. (New) The method of claim 26, further comprising reacting the second composition with an alkaline solution to form a hydroxide compound.

29. (New) The method of claim 1, wherein the first composition comprises at least one hexanoate.

30. (New) The method of claim 1, wherein the second composition comprises an organometallic rare earth element comprising a compound selected from acetates, propanoates, hexanoates, esters, amines, and aromatics.